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ABSTRACT

Proceedings of the 18th Annual Conference of the Conservation Education Association, held in Ann Arbor, Michigan, August, 1971, are reported in this booklet. Utilizing the theme - The Environmental Crisis: Root Causes and Opportunities for Solution - the program was aimed at environmental problems where we live; the urban area. It dealt with citizen action, focused on root causes, and featured involvement through exposure to environmental problems brought on by man's concentration of technology in population. Major addresses were entitled, "Underlying Issues of the Environmental Crisis;" "Role of Citizens and Citizen Organizatis Within the Legal System - Judicial Approach;" "Eco-Tactics and Organizations - An Action Approach;" "Responsibilities of the Individual - A Life Style Approach;" "Role of Citizens and Citizen Organizations Within the Political Process - Legislative Approach;" and "A New Role for American Education - A National Strategy." Other sessions dealt with the role of the state environmental education consultant, the open classroom approach to environmental education for inner city youth, developing state environmental education plans, elementary and secondary education, youth organizations, colleges and universities, and the general public--influential citizens--policy makers. Environmental influences and problems are exemplified through descriptions of field trip activities. A roster of conference participants is included. (BL)

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ENVIRONMENTAL CRISIS: root causes and opportunities for solution

SPONSORED BY THE MICHIGAN ENVIRONMENTAL EDUCATION ASSOC. IN COOPERATION WITH THE UNIVERSITY SCHOOL OF NATURAL RESOURCES AND EXTENSION SERVICE.

REPORT
18th ANNUAL NATIONAL CONSERVATION EDUCATION ASSOCIATION CONFERENCE

August 15–19, 1971
UNIVERSITY OF MICHIGAN
Ann Arbor, Michigan

SE 013 170

Report of the Proceedings

1971 CONSERVATION EDUCATION ASSOCIATION CONFERENCE

University of Michigan

Ann Arbor, Michigan

The following is taken from the welcoming comments of CEA President, Clarence E. Billings

Let me leave you with these quotes:

"Where there's no vision ... the people perish."

"There is no wealth but life."

"The Stakes in the battle are far greater than we have ever fought. To lose this one is to lose the earth."

Since we last met there are seventy million more of us on this planet.

Let us be about our business.

Barbara Horn, Editor
William Vogt, Assistant Editor
Representing the CEA Board

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INTRODUCTION

The 18th Annual Conference of the Conservation Education Association, held in Ann Arbor, Michigan, has come to a close. These proceedings reflect the dedication of conferees and presenters alike. We hope they will serve as a useful tool in expanding the conference theme---THE ENVIRONMENTAL CRISIS: ROOT CAUSES AND OPPORTUNITIES FOR SOLUTION. Emphasis of the program was aimed at environmental problems where we live; the urban area. It dealt with citizen action. It focused on root causes. It featured involvement through exposure to environmental problems brought on by man's concentration of technology in population. The 333 registered conferees from 38 states, Canada, the District of Columbia, the Phillipines, and the Virgin Islands were treated to a different kind of conference than those proceeding it. We hope the change was stimulating, progressive and will have lasting value.

ACKNOWLEDGEMENTS

The 1971 CEA Conference could not have been accomplished without a great team effort.

Special thanks are in order for the CEA Board of Directors and our CEA President Clarence Billings who gave counsel on program format, facilities and proceedings: To Mrs. Joyce Schrock of the Conference Department, University of Michigan Extension Service, and her courteous and competent staff; to the School of Natural Resources of the University of Michigan in numerous students who volunteered both time and talent; to the Michigan Department of Natural Resources who provided art work, conference folders and manpower; to Richard LaCure who produced 4 issues of the conference newspaper under extremely trying conditions; to the Riverside Paper Corporation, Appleton, Wisconsin, which provided 100% recycled paper for the conference newspaper; to the Michigan Conservation Education Association which provided the impetus and was overall host for the Conference; to those who provided outstanding displays; to the Michigan Natural Resources Magazine and the Michigan Student Environmental Confederation for door prizes; to David Johnson for pulling the conferees together with door prize drawings and interviews; and to Barbara Horn who tirelessly gathered materials for the proceedings and was always on hand to answer questions in the registration area.

Most of all our thanks to the conferees who participated in the 1971 CEA Conference, shared their talents and returned home with increased understanding on the resolution of our environmental crisis.

1971 CONFERENCE PLANNING COMMITTEE

Co-Chairmen - William B. Stapp - Rodney R. Smith

Conference Coordinator - Joyce Schrock

Floral Arrangements - Walter Van Dien

Camping - James Mohr

Newspaper (Conference Daily) - Richard LaCure

Tourist Promotion - Charles Budd

Displays - Ellen VandeVisse

Door Prizes - David Johnson

Proceedings - Barbara Horn

Banquet Arrangements - Walter Van Dien

Hospitality - Glen Williams

Field Trips - William Stapp and James Swan

Conference Portfolios - Rodney Smith

MEEA Desk - Barbara Horn and Bernard Ansley

PROGRAM

18th NATIONAL CONSERVATION EDUCATION ASSOCIATION CONFERENCE

University of Michigan, Ann Arbor, Michigan

August 15-19, 1971

ENVIRONMENTAL CRISIS: ROOT CAUSES AND OPPORTUNITIES FOR SOLUTION

Sunday, August 15

1:00-4:30 p.m.	Registration--East Quadrangle
5:00-6:30	Dinner--East Quadrangle
7:00	Registration--Rackham Lobby
7:45	Welcome--Rackham Lecture Hall Presiding: Justin Leonard, UM School of Natural Resources Clarence E. Billings - President, Conservation Education Association Michigan Senator Gilbert E. Bursley, Ann Arbor John W. Porter - Superintendent of Public Instruction, State of Michigan Charles Guenther - Executive Assistant to the Director, Michigan Department of Natural Resources Keynote Address - Underlying Issues of the Environmental Crisis Stanley Cain - Director, UM Institute for Environmental Quality

Monday, August 16

7:00-8:00 a.m.	Breakfast--East Quadrangle
8:30	Orientation--Rackham Lecture Hall Field Trip - Neighborhood Ecology, Environmental Planning, Ecology Center, River Valley William Stapp, UM School of Natural Resources
12:00-1:15	Lunch--East Quadrangle
12:00	Displays Open--Rackham
2:00 p.m.	General Session--Rackham Lecture Hall Presiding: Russell McKee - President, American Association for Conservation Information Role of Citizens and Citizen Organizations Within the Legal System--The Judicial Approach Victor Yannacone - Attorney, Environmental Law
3:15	Coffee--Rackham
3:30	Eco-Tactics and Organizations--An Action Approach Denis Hayes - Environmental Action, Inc., Washington, D. C.
5:00-6:00	Dinner--East Quadrangle
7:30	Youth Program--Rackham Lecture Hall Panel Moderator - William Bryan

Tuesday, August 17

7:00-8:00 a.m.	Breakfast--East Quadrangle
9:00	General Session--Rackham Lecture Hall Presiding: E. J. McClendon, Michigan Department of Education

	Responsibilities of the Individual--A Life Style Approach Spenser Havlick, UM School of Natural Resources
10:00	Field Trip--All Day--Detroit and Toledo Areas James Swan, UM School of Natural Resources
6:00 p.m.	Ox Roast--German Park
8:00	Interest Groups--Concurrent Sessions Role of the State Environmental Education Consultant Co-Chairmen: John Pager - U. S. Forest Service, Milwaukee David Engleson - Environmental Education Coordinator, Wisconsin Department of Education Open Classroom Approach to Environmental Education for Inner-City Youth Chairman: Joseph Hassett, Wave Hill Center for Environmental Education Developing State Environmental Education Plans Chairman - Joseph Chadbourne, University School, Chagrin Falls
Wednesday, August 18	
7:00-8:00 a.m.	Breakfast--East Quadrangle
9:00	CEA Business Meeting--Rackham Lecture Hall
10:15	Coffee
10:30	Interest Groups--Continued from Tuesday
12:00-1:15	Lunch--East Quadrangle
2:00 p.m.	General Session--Rackham Lecture Hall Presiding: Virginia Sorenson, Western Michigan University Role of Citizen and Citizen Organization Within the Political Process--Legislative Approach Douglas Scott - Projects Coordinator, Wilderness Society, Washington, D. C.
3:15	Coffee
3:45	Workshops Elementary and Secondary Education Joseph Hassett, Wave Hill, New York Youth Organizations Gerald Schneider - Audubon Naturalist Society, Washington, D. C. Colleges and Universities Clay Schoenfeld - University of Wisconsin, Madison General Public, Influential Citizens and Policy Makers Joan Wolfe - West Michigan Environmental Action Council
6:30	Banquet--Michigan League Ballroom Presiding: Merrill Petoskey - Michigan Department of Natural Resources A New Role for American Education--A National Strategy George Lowe - Environmental Education, U. S. Office of Education, HEW
Thursday, August 19	
7:00-8:00 a.m.	Breakfast--East Quadrangle Tour Planning--Great Lakes States
9:00-3:00	Optional Tour--Greenfield Village

WELCOME

Michigan Senator Gilbert E. Bursley, Chairman Senate Education Committee

It's a pleasure and a privilege to be able to welcome all of you to this conference on Environmental Education and the Environmental Crisis.

In a sense, I'm somewhat in the position of a layman speaking to experts here. I'm deeply impressed by the wealth of knowledge and experience that has been brought together for the week ahead, and by the tremendous potential for accomplishment that lies in an exchange of ideas and in joint, coordinated action.

But in another sense, there can be no laymen where the environmental crisis is concerned.

We sometimes find it difficult, in the Michigan Legislature, to impress members who live in rural areas with the problems of the inner cities...or convince members who live in cities that rural areas also have problems... or get recognition of either type of problem from members who live in the suburbs.

The environmental crisis transcends that difficulty. It's everybody's problem. The environment is where all of us live and where generations to come will have to live.

In light of the vast, all-encompassing scope of this area of concern, I find myself asking: "What is environmental education? Just what is the job of the environmental educator?"

Not long ago, I introduced a Senate Concurrent Resolution, which was subsequently passed by the Legislature, requesting the State Board of Education to establish guidelines for environmental education in our schools.

I've since wondered many times whether guidelines, once established, might be misinterpreted. I intended them as suggestions for local school boards and as aids to individual teachers.

They were not intended, and cannot be permitted to become a substitute for what is really needed: Environmental awareness and environmental concern in every area of education and every variety of subject matter.

Nothing could be more self-defeating than for state government to believe its role in environmental education was fulfilled through the promulgation of guidelines...or for our schools to believe their role was fulfilled through mere adherence to those guidelines.

After all, what area of education can be totally divorced from environmental considerations today? What course? What grade level? What lesson or discussion-topic in what classroom?

Can we go on teaching economics in the traditional manner describing our free enterprise system from a viewpoint that almost completely ignores the costs of disposal?

Can we go on teaching history by describing this nation as the Land of Opportunity...and make no mention of what opportunists have done to the land?

Can there ever again be such a thing as "pure" science in our classrooms and laboratories? Can we still study chemical reactions and biological phenomena in a detached, objective manner...with no real thought of our own stake in what we observe?

Just last week, this nation carried out another successful expedition to the moon. Most of us saw a breathtaking TV spectacular, as two astronauts ventured out a few miles in an $8 million vehicle that set an all-time record for planned obsolescence.

Immediately, the old debate erupted again, the continuing arguments we've been hearing for years: Is it really worth all those billions to send men to the moon?

I'm not going to take either side of that argument, but there is one point I'd like to make. To my mind the most valuable part of the entire Apollo program lay not in the moon rocks and moon dust we brought back, not in the scientific information obtained, and not in the technological advances that were made. It lay instead in the glimpse we were given of a totally sterile world, and in the psychological potential that that glimpse could have for humanity.

Perhaps, as a result of our look at that lifeless landscape or moonscape, a vitally needed awareness has begun to dawn on our national consciousness. We don't want earth to look like that and it could so easily.

Perhaps we are finally gaining the all-important realization of just how precious life is and how precious everything upon which life depends must also be. I certainly hope so. We'd all better hope so.

So I say again, there can be no laymen in this field, and the job of the environmental educator is to see that there are no laymen! In other words, environmental education isn't a matter of a single course, or even of a total curriculum.

Environmental education is the job, the vital and essential job, of convincing our society as a whole that our environmental heritage is just as precious as our heritage of freedom and just as easily lost.

WELCOME

John W. Porter, Superintendent of Public Instruction, State of Michigan

It is a pleasure for me to be with you this evening and to have the opportunity to welcome you, and to extend best wishes for a successful conference from the State Board of Education.

One of the stimulating and challenging phenomenon of the last five years has been the gradual emergence of a mass awareness of the critical importance of our environment, and the need for all of us to have a basic understanding of the ecology of this world.

Unlike the Astronauts of Apollo 15, if we lose our life-support system, we have no place to go and we are realizing more and more with each passing day that this spaceship, Earth, on which we exist as passengers, is not without limits to its resources.

For too long a time there have been those who have felt that man must "conquer" nature. We are now slowly realizing that man must make every effort to live with, and work in consort with nature if he is to survive.

Last year the Congress of the United States passed the Environmental Education Act. As much as $45,000,000 will be programmed nationwide under this act. The implications are clear. If we are to make the kind of impact that is necessary for our children, youth, and adults to be conscious of what is happening to our resources, we have to begin in our elementary schools, our high schools, our colleges and universities, and our adult education courses.

Our schools cannot of and by themselves do the job that must be done. In fact, most of the crucial problems confronting not only our society but all the societies of the world, can only be resolved by a coordinated and unified massive, frontal attack on the part of every segment of our society. It is no longer enough for industry to produce, without at the same time being responsible to some degree, for the constructive disposal of its products. It is no longer enough for business to push and promote the newer, and better and bigger, without being aware of, and responsible for, what happens to the newer, the bigger and the better.

We can only be successful in this endeavor if we begin at the same time to develop to its full potential the only resource that can make that endeavor successful--our human resource. Unless every individual can understand the implication of the natural processes that make this world livable for human beings--and you can only do this through education--then all the dynamic words, the ambitious programs and all the money will accomplish nothing.

Education is a part of our heritage. It is a part of our government. Lincoln once said that one of the responsibilities of government in a free society is to do those things for the common good which the people themselves are not able to do. Both the state and federal governments have begun to take those necessary steps to control those forces which if left uncontrolled would ultimately destroy life on this planet. An intelligently planned "sanitative environment"--a healthy environment is one in which all people live and prosper. Basic to this assumption is education.

Ecology and environment have become the imperatives of the 1970's. Science fiction writers, from H. G. Wells on down to today, have written of the many potential catastrophies both natural and man-made that could overtake mankind. It would be tragic, indeed, if we ignore the signs already indicating what must be done to reverse this trend toward a man-made disaster.

We must reinforce and urge expansion of those steps already taken by Congress to find the answers to these problems, and we must prepare our children and youth, through excellent educational programs to be able to deal intelligently and adequately with the demands of the future.

I therefore extend to each of you encouragement, and best wishes for a most successful week working together on this challenge.

WELCOME

Charles Guenther, Executive Director, Michigan Department of Natural Resources

On behalf of Dr. Ralph MacMullan, the Director of the Michigan Department of Natural Resources, I'd like to welcome you to Michigan to participate in your 18th Annual Conference. "Environmental Crisis: Root Causes and Opportunities for Solution", I like that title because after these many years the masses of people are beginning to listen. They are beginning to listen to you people who have spent a whole lifetime from one environmental crisis to another. The masses aren't only beginning to listen, they're beginning to talk back.

We can't help but be awed by man's recent exploration of the moon. Seeing the pictures of the earth taken by the Apollo crew, I could see the earth sitting out there in a void, and it made an impact on me. Then I fully understood the things we are fighting for.

Let me tell you about one or two things our department is doing. For example, we've made some inroads in our fight against hard pesticides.

More recently our Natural Resources Commission with a letter from our Governor Milliken set an eight-month moratorium on the leasing and drilling of oil in our northern slope. We did this, because we were afraid of the environmental impact in this field.

This past week, we opened up a new battle concerning a conflict of interest on some of our major river systems. There is definitely a conflict of interest between the landowner, the fisherman and the canoeist. We set some rules and regulations on who should use the rivers at what time.

We have to look straight ahead, look the problem in the eye, and do everything within our power to solve it. That's why you people are here. Because you're concerned with the environmental crisis, and I'm sure that during this conference you're going to look deeply into some of the root causes and find an opportunity for solving these problems.

UNDERLYING ISSUES OF THE ENVIRONMENTAL CRISIS

Stanley Cain, Director, University of Michigan Institute for Environmental Quality

The theme of this conference makes an assumption that there is now an environmental crisis. I know of no public opinion survey that would tell us how many persons in the United States believe that we are now faced with a crisis situation, that crisis is imminent, or that we will be in crisis condition at the end of the century. For every scientist, agency official, or politician who has warned of danger ahead or at hand, there are others who come forward to minimize or even refute the statements. The public is confused and wonders who are the experts. The persons who read and listen carefully are left with a balance of fear because of the obvious vested interests of those who minimize the dangers.

The public has been alerted to supposed dangers to our streams and lakes because of the phosphorous in detergents that cause eutrophication of the waters and diminishes their natural usefulness. The manufacturers claim it isn't so.

The public has been led to believe that the use of DDT is upsetting the balance of nature by the killing of many harmless or valuable species of farm, field, forest and water. It has become well known that such chemicals when used long enough do not permanently control mosquitoes that are vectors of malaria and encephalitis. The chemical manufacturers and the users of pesticides say that they are indispensable for human health and the production of food. One doesn't have to be cynical to notice a difference between the points of view of public and private interests.

The development of nuclear energy is one of the scientific and technical breakthroughs of the past quarter century. The harnessing of nuclear energy for electrical power production will increase as the demand for electricity grows and fossil fuels become more scarce. The uneasiness about bombs is transferred to nuclear power stations because of a lack of confidence that the safety engineering is adequate. Equally reputable scientists and engineers as those working for the Atomic Energy Commission and public utilities say that the fail-safe mechanisms are not in fact safe.

Toxic materials in the environment are increasing daily in quantity and variety because of their purposeful use for certain production processes and because of their discharge into the environment as waste. Recently we have been hearing much about heavy metals while there are probably hundreds of organic and inorganic compounds that are toxic to man, animals and plants. They come from manufacturing. They are discharged into sewer systems from homes, hospitals, and other useful institutions. The movement toward standards is starting but much of the public knows that there are no adequate monitoring programs to measure what is in the environment, where it is, and how it may be increasing. More uneasiness arises from the fact that existing standards are not based on adequate research, especially as to the effects of chronic low-level exposure.

In addition, there is the progressive loss of wilderness and habitat for endangered species, the serious problems of cities, the disruptive intrusion of highway systems into farm and city alike, the loss of human scale in urban renewal projects, the prevalence of central-city slums, the ever-increasing noise we have to live with, great river impoundments in Asia, Africa and Latin America as well as in the U.S. and the U.S.S.R. with little attention to the resulting burden on displaced and resettled people.

Do these add up to environmental crisis? Perhaps they do for some people in some places; however, most are worried but not yet convinced. These retain a basic confidence in science and technology.

Whether now or not, I can conclude with no doubt in my mind that if certain trends continue, we will be faced by crises that would pile up their impacts to catastrophic proportions. This brings us to the consideration of the Root Causes.

There are many causes interrelated and interacting. Perhaps our persistent failure to recognize such interrelations among our actions and their consequences is the basic cause of our troubles. Somewhere along the line we have gotten the idea of the simple, direct cause-and-effect relationships. The fact is, there are many causes of one effect and many effects of one cause. This long standing, over-simplification of the ways of nature and the ways of man has led to single purpose action. These two things together are the root cause of our trouble. By single purpose actions, we mean the goal of one product, or one service, with inadequate attention, if any, to waste products, not even to convert them to valuable by-products. We ignore them by giving them the name of "externalities".

Criticism of this habit of mind and behavior is not new. It led Kapp many years ago to write a book with the title The Social Cost of Private Enterprise. Today we are not much closer to considering social costs as a part of production than we were then.

Parallel examples of anything we don't like in industry can be found in government. Generally speaking, government functions on the basis of laws enacted for specific purposes, sometimes amended for specific purposes. The work of the government is carried out through agencies which are large in many cases, subdivided, and subdivided again until there is specific responsibility for each unit, often with very little coordination.

The solution to this deep-rooted problem, if there is a solution, would have to start with education. I do not mean just in the schools and colleges but also in all ways that adults can be reached. This problem is one of reaching the decision-makers. But the decision-maker, whether in private enterprise or whether in government must be reached with the full impact of the problems of the environment. We must be sure to put all the pressure that we can so that not only will there be understanding, but there will be action as well. You've got to keep the pressure.

Let's speak of science first as an example of scholarship and high-skill levels. A century ago, the field of natural science was commensurable by one man who, more often than not, held a professorship of natural philosophy in one of the few classical universities. Such a man could be familiar with facts of all biology or physical science or both. As science became respectable and successful in its applications, it attracted more devotees. Knowledge grew and as a natural consequence so did its fragmentation into special, more narrow fields. The cliche expresses the result--more and more about less and less. This was fostered by the growing doctoral programs of universities. It inevitably affected the application of science in technology and development. Engineering became likewise fragmented.

The results have been generally pleasing to most persons. They have led to the development and the affluence of the western industrialized countries. They have set the present goals of all the underdeveloped and developing nations around the world whose ambition is to replay western history. Most of the international development programs are designed that way. If this is true for governmental and UN assistance programs, it is certainly a charge that can be brought against the natural resources exploitative enterprises of business, industry and finance.

This adds up to a global expansion of the demand being placed upon the finite natural resources of the world, on a limited environment. The rate at which the demands grow has been accelerated, not just because development is occurring in formally underdeveloped countries, but because our rates of consumption continue to grow in countries like our own. This adds up to global expansion of demand, and we are accelerating the rate at which we are losing environmental quality, and we are shortening the time in which we can foresee the ability to support this growing demand. We can't sustain an infinite demand in a finite world.

So far, I have really spoken of only one basic cause of impending environmental crisis, our failure to view the world as a global system of man and environment within which are many subsystems. I will now look at two derived causes, both of which place demand upon the natural world, the demand that is now bringing on the crises. The first is the human population explosion. Without science man lived pretty much like animals a high death rate balanced by a high birth rate. There were times and places where one could say that there was over-population, an imbalance between demand and nature and man's ability to meet it. I think, that what we now call population explosion can be dated within the last quarter of a century. This is the time during which poor countries have acquired lower death rates while maintaining high birth rates. The world rate seems to be not less than 2.0%: fast enough to double in 35 years if it continues. Persons now alive may find a world of 7 billion or more people demanding sustenance from the natural world, to be wrung from it by technology.

This explosion is in large part attributable to national and international health programs with a concentrated attack on the causes of death and little or no attack on high birth rates. Despite the most humanitarian goals, these efforts have resulted in the sharing of poverty, not the sharing of wealth.

The second aspect, also a derived cause, is that of our approach to the environment in our sometimes mad scramble to make it yield raw materials for the industrial machine. This can be illustrated in many ways. Energy consumption is probably the closest correlate with economic development. Fossil fuels supply about 2/3 to 3/4 of the consumed energy of advanced, industrialized countries. Petroleum is used to generate about 40% of the electricity we use in the United States. The rate at which the total consumption of energy has been increasing has been such that it tends to double in about a decade. This means four times the power of plants by the end of the century, most of which will be nuclear. This fantastic rate of growth as illustrated by the important resource of the fuels to produce electricity, is again a cause for crisis which results from our single-purpose thinking.

The drive for energy has been ruthless. Great hydroelectric dams have become somewhat multipurpose, but for many in the United States, U.S.S.R. and Africa, for the Aswan High Dam, and for Mekong plains, very limited objectives have caused us to ignore a large train of derived consequences which provide great difficulties and costs.

Fortunately the people and the government are beginning to force greater consideration of these "externalities".

I have said that we must reach the decision-makers. In the last analysis, we are the decision-makers. We have the children. We consume the goods and services. We create the demand and have the expectation of continuing growth. We, also, will have to pay the cost of developing shortages and of cleaning up the mess in the environment. If we don't like it, we must change. We will have to pay the consequences for consuming away our world.

Members of the Conservation Education Association are experienced teachers and public education specialists. You now have special opportunities because of governmental programs that can help you.

I have referred to the traditional decision-makers such as the elected officials, administrators of public agencies, and the managers of private enterprises. They bear a heavy burden. If they carry it well, they will have to be helped by the understanding and the actions of each of us as voters, as participants in citizen organizations, as stock holders, and as consumers. Being a change agent starts at home. Each of us is a decision-maker.

FIELD TRIP: ENVIRONMENTAL PLANNING - Bill Stapp

The theme for this field trip was environmental planning. The focus was on the Ann Arbor environs. After a brief introduction to environmental planning and the political structure of Ann Arbor and Washtenaw County, a tour of Ann Arbor proceeded.

The group leader was accompanied on the bus by Mrs. Marilyn Thayer, an active and influential citizen. Major emphasis was placed on recreational planning, transportation systems, sign ordinance, flood plain zoning, shopping center developments, downtown malls, and strip developments.

In creating a physical environment to meet the living, working, and recreational aspirations of its citizens, a planner must consider social, economic, and governmental goals. The importance of comprehensive environmental planning was stressed.

As the environment and associated problems in Ann Arbor were analyzed, major attention was devoted to the role of education in alerting the citizenry to the importance of environmental planning and their role in contributing to the solution of environmental problems.

As each environmental issue was presented, the leaders encouraged group participation in order to provide a broad perspective. The group was very responsive and this added a significant dimension to the tour.

FIELD TRIP: NEIGHBORHOOD ECOLOGY - Michael Schechtman

The neighborhood ecology field trip had as its topic the ways in which citizens in Ann Arbor have come together in order to identify local environmental concerns and to work for a quality neighborhood environment. The particular focus of the morning was the Sister Lakes Conservation Association, and the role this group has played in protecting and preserving 1st and 2nd Sister Lakes. While driving out to the Sister Lakes watershed, the group observed urban growth patterns in Ann Arbor and the associated problems, and discussed local ordinances and commissions which have been informed to deal with these problems, such as sign, erosion control, air pollution ordinances, and the Historical Commission and the Old West Side Organization. After touring the watershed region and familiarizing themselves with the problems, the members of the group then had a question and answer session, with two members of the Sister Lakes Conservation Association, primarily discussing community organizing tactics and strategies for moving local government to protect the endangered SistersLakes.

FIELD TRIP: ENVIRONMENTAL TOUR - ANN ARBOR - Wally Rensch

This trip in the Ann Arbor area, concentrated on problems of the central business district, residential areas, open space and industrial development.

Throughout the city an emphasis was placed on the use of plantings to blend man's cultural and biophysical environment more naturally.

In the business district and campus area examples of specialized global maple, columnar maple, pyramoidal oak, and several smog resistant species are found. Such trees used in the reduction of glare in school sites and businesses provide many other benefits. The beautiful central business district of Ann Arbor allows maximal citizen participation as groups of retirees, scouts and others maintain the plant boxes.

This is also the case in school site planning. The Thurston Nature Center shows how active student involvement may lead to community spirit.

Many examples of open space planning, such as the Huron Parkway, created by tax incentive, well demonstrates how to stretch and save open space.

The primary concern is what you have when you're finished working. Is it an empty lot, or a creative and well used play lot?

FIELD TRIP: ENVIRONMENTAL TOUR - ANN ARBOR, ECOLOGY CENTER - Diane Drigot

What has the "student environment movement" achieved beyond creation of an Earth Day, media-sustained fad? One of the more visible measures of "grass roots" success is the spawning of more than twenty ecology centers across the country. The Ann Arbor Ecology Center is one of these. Started by ENACT, the University of Michigan student-based environmental group, the activities and operation of this Ecology Center have been shifted to the shoulders of the community-at-large. The Center operates under 50103 status from the Internal Revenue Service; as a nonprofit, tax-exempt, and tax-deductible educational institution. It serves as an information and communication headquarters for individuals and organizations in both the student and area-wide community. The Center itself does not engage in political activity, however, it does encourage involved individuals to further their environmental concerns through suitable political channels.

The first stop was the Center, where Cecil Ursprung, business manager for the Center, greeted us. He prepared an economic impact report, concerning a controversial proposed shopping center on the edge of town. This report provided a basis of argument for those concerned with the shopping center's impact on the environmental and social fabric of the city. We visited the site of this proposed shopping center and discussed the basic issues with Jerry Fulton, a spokesman for the local Sierra Club, now involved in legal dispute with the developers. At stake are the problems shared by urban areas all over the nation: how to control urban sprawl and blight that results from uncoordinated zoning, neglect of the central business district, population pressures, imcomplete cost/benefit analysis, and other such practices, which push social and environmental values into the background behind growth-oriented priorities. The role of the citizen, as individuals and groups, is to challenge this growth-oriented system of national priorities. It can be done if citizens provide themselves with a forum and a willingness to mobilize around local manifestations of these national distortions in priorities. In this case, it is doubtful that Ann Arbor needs another shopping center when it cannot adequately maintain and upgrade the quality of those already present in the community.

Of course legislation and legal battles can gain no allies if the public is unwilling to make a personal commitment insofar as a total life style approach is concerned. It is here the Ecology Center plays a most vital role--demonstrating to the public some alternative, ecologically-sound ways in which to live.

The Owens-Illinois Glass Company and the Ecology Center cooperated on a series of glass drive days to demonstrate citizen concern for solid waste problems and a willingness to take action when a responsible program is available. As an outgrowth of this cooperative campaign, a permanent recycling center has been established in Ann Arbor. This project is manned by predominantly volunteer staff, and engaged in a continuing educational campaign for citizens to become a "re-use" rather than a "throw-away" society. As a result, up to thirty tons of glass are being recycled weekly.

The Community Organic Garden, a seven-acre plot of organically grown produce was the brainchild of the Ecology Center, with the financial support of Institute for Environmental Quality. The fruits of labor are recycled among those who work the garden and are also shared with other groups such as schools and hospitals that use the garden for educational purposes.

The overall objectives being met are to demonstrate how an ecological lifestyle involves changes in our methods of production and consumption.

ROLE OF CITIZENS AND CITIZEN ORGANIZATIONS WITH THE LEGAL SYSTEM - A JUDICIAL APPROACH

Victor Yannacone, Attorney, Environmental Law

"We hold these truths to be self evident, that all men are endowed by their creator with certain inalienable rights, and among these are life, liberty and the pursuit of happiness." Congress said that on July 4, 1776. Ten years later, another Continental Congress amended the constitution and said, "The enumeration in the constitution of certain rights shall not be construed to deny or disparage others retained by the people."

I think this group is aware that among those inalienable rights retained by the people is the right to air, clean enough to breathe, water, clean enough to drink safely, and an environmental quality sufficient to maintain and encourage the development in evolution of the uniquely human characteristics of man which transcend the mere biological heritage of mankind as a species.

We all recognize that our government has been established as the trustee of the sovereign people of the United States, and surely no one doubts now that our natural resources are held in trust for the full benefit, use and enjoyment of the people, not only of this generation but of those generations yet unborn, subject only to wise use in the advancement of civilization.

American businesses and industries tell us they are providing the cleanest air and the cleanest water that the existing state of the art of pollution control technology can yield.

The public interest in environmental litigation is in large measure the direct result of one attorney's answer to a series of rhetorical questions posed on September 30, 1967 at the National Audubon Society Annual Convention. What can you do when a municipality decides that the highest and best use of the mighty Missouri River is the city sewer? What can you do when government agencies seriously consider drowning the Grand Canyon or much of central Alaska? What can you do when a combination of government agencies and private speculators act in consort to destroy the delicate ecological balance of the entire state of Florida? What can you do when the United States Department of Agriculture publically states that it does not consider the possible adverse effects of chlorinated-hydrocarbon pesticides such as DDT on non-target organisms, or permits them to be sold and used even when their adverse affects become generally known? What can you do when timber and paper companies cut down the entire forests of redwoods and other exotic species in order to reforest the areas with faster growing pulpwood trees? What can you do when real estate speculators insist on dredging estuaries in order to fill salt marshes, or strip the topsoil from irreplaceable prime agricultural land in order to plant houses? George Washington Carver said, "Civilization declines as it loses its topsoil."

What can you do? The time has come for you who are committed to the preservation of our environment, to enter the courtrooms to protect our natural resources. It is time to assert your basic rights as citizens. Rights that were guaranteed in the constitution and derived from the Magna Carta. It is time to establish, once and for all time, that our natural resources are held in trust by each generation for the benefit and enjoyment of the next. Today while there is still time you must knock on the courthouse doors throughout the country and seek equitable protection for the environment. You must assert that fundamental doctrine of equity jurisprudence, a doctrine as old as civilization, yet a doctrine as topical as today and as advanced as tomorrow. Use your own property so as not to injure the property of another, in particular that which is the community property of all mankind, the air we breathe, the water we drink.

Experience has shown that litigation seems to be the only civilized way to secure immediate consideration of such basic principles of human rights. Litigation seems to be the only way to focus the attention of our legislatures on these basic problems in human existence.

Conservationists, you who would make wise use of our natural resources, look at the history of the human rights' struggle in the American courts. The major social changes, which have made the United States a finer place in which to live, have all had their roots in fundamental constitutional litigation. Litigation survives today as the hope of citizens seeking regress of a public wrong. If you the citizen do not foresake your causes, they will not foresake you in your hour of need. Thomas A'Becket and Thomas Moore are only two of the many men who have given their lives so that you, the citizen, may have your day in court.

At this time in history the environmental interests of society can only be protected by direct legal attack upon those actions which can cause serious, permanent, irreparable damages to our natural resources. Only by asserting the fundamental constitutional right of all the people to the cleanest environment modern technology can provide, and asserting this right on behalf of all the people in courts of equity throughout the nation, can we hope to defend our environment.

The time has come to housebreak industry, before the house is unfit for us to live. We must establish once and for all time as a fundamental principle of American justice, that industry and business owe each of us the cleanest air and water that the state of the art of pollution control technology can provide. The time has come to insist that government is but the trustee of the sovereign people and that our national natural resource treasures are held in trust to the full benefit, use and enjoyment of all the people.

Industry and government can ignore your protests, they can refuse to read your picket signs, they can repress your demonstrations. But no one, business, industry or government can ignore that little scrap of legal cap that begins, "You are hereby summoned to answer the allegations of the complaint within twenty days or judgment will be taken against you."

You may be sure that no one in business, industry or government ignores a court summons. The president of the corporation will read it. The chairman of the board will read it. Government officials and bureaucrats at all levels will read it. Their lawyers will read it. Their lawyers' lawyers will read it. Most important of all for individuals and society, they must answer. Not in the press, where their flack men can distort the issues. Not in the market place, where all their economic power can be concentrated. Not in any place where the millions of mighty industrial and government empires can really help, but in the courtroom, where as far as the facts are concerned, you the individual citizen are the equal of any corporation, business or government agency.

Experience has demonstrated that litigation is the only nonviolent way to focus legislative consideration on fundamental human rights. The only way short of bloody revolution.

"This land is your land, this land is my land." This land doesn't belong to Boeing, General Dynamics, Grummen, Hughes, Lockheed, TWA, American, United, or any other airline or aerospace company.

This land does not belong to Aluminium Limited, Alcoa, Kaiser, Reynolds, Anaconda, Kennecot, Phelps-Dodge, American Metal, Climax, International Nickel, or any other nonferrous metals company.

This land does not belong to US Steel. This land doesn't belong to the automobile company. This land doesn't belong to the Bank of America, Chase Manhattan or any other financial institution. This land doesn't belong to any of the tobacco companies or any of their advertising agencies.

This land doesn't belong to American Can, Crown Zellerbach, Container Corporation, KPV Sutherland, Kimberly-Clark, St. Regis, Scott, or any other paper company, packaging or container companies.

This land doesn't belong to any retail merchandiser, Gimbles, Macys, Grants or Sears and Roebuck. This land doesn't belong to any casualty or life insurance company. This land doesn't belong to <u>any</u> industry.

This land doesn't belong to FCC, FAA, DOT, CAB, DOD, ICC, FPC, USDA, HEW, HUD, FHA, or any other government alphabet agency.

This land belongs to its people. The air we breathe, the water we drink and our national natural resource treasures need the protection of our courts.

Don't just sit there like lambs waiting to be slaughtered or canaries testing the air in a mine. Don't just sit around talking about the environmental crisis, or worse yet just listening to others talk about it. Don't just sit there and bitch. Sue the bastards!

From time immemorial all land was the absolute personal property of the sovereign. It could be used, abused, given or taken by the whim of the sovereign. In some societies the king was the sovereign, in others the state. Here in the United States we the people, collectively, in common are the sovereign. In the United States all of the powers held with respect to the land once held by the king of England, France or Spain are now held by the people, by the legislative, executive and judicial branches of the government acting as agents, trustees and keepers of the power of the people.

The United States Constitution provides that the rights not explicitly given by the people to the government, are retained by the people. The powers not delegated to the United States by the Constitution, nor prohibited by it, by the states are reserved to the states or to the people.

At no time did the sovereign people of the United States give up the ultimate right to determine the highest and best use of land on behalf of the American people. Neither did the people of the individual states give up their rights collectively as the sovereign state to provide for the common good and insist on behalf of all the people, that land use be according to the highest and best use as determined by the physical and environmental parameters of that land and the region of which it is apart.

The justification for any restriction on the individual use of land is found in the concept of popular sovereignty. If we want to live in any kind of harmony with that which has been given to us from preceding generations and from the earth before man, we must make certain assumptions with respect to every available piece of land in the nation. Each land area is intrinsically suitable for certain uses. Development of some kind is inevitable. Any area is vulnerable to serious permanent irreparable damage if development ignores naturally imposed environmental constraints. Any law regulating the use of land must include protection of natural resources as an element of human welfare.

While it has long been recognized that planned growth is a greater benefit to society than unplanned growth, the planning processes traditionally lack significant input from the environmental sciences.

Recognizing the limited availability of land itself, land use has been historically limited by legislative, executive and judicial process. The judiciary in the United States has upheld the attempts of several states and at the local level municipalities throughout the nation to restrict the use of land in accordance with some rational plan, usually described euphemistically as the community or regional plan.

We are talking about systems...interdisciplinary cooperation. Zoning laws have been upheld by the courts on the grounds that they represent an attempt by an individual community, government agency or state to determine the highest and best use of its limited land resources for the greatest good or the greatest number of people without any undue infringements on the individual right of private property. The key to successful zoning legislation and the protection of our fragile land resources is the determination of the highest and best use of those natural resources. Of necessity this must now be done by a team of individuals trained in the various disciplines necessary to define the environmental parameters of the regional ecological system. The community itself particularly its people, constitute elements of that regional eco-system just as surely as does the basic land itself, its topography, hydrology, meteorology and climatology.

What does all this mean to you? It means that if you honestly think you can protect your natural resources by keeping millions of people locked into a concrete and asphalt jungle and surround them with a wall of suburban slur, you're wrong. Unless you can make wilderness relevant to a child whose acquaintance with animal

ecology consists of predicting the outcome of cockroach races on the wall, or betting on the number of rats that will cross the bedroom at night; unless you can make a wilderness he may never see and his children may never hear about relevant, you'll lose those redwoods to the suburban redwood furniture lovers. You'll lose your water supplies and rivers to the dam builders.

It appears that the battleground for the next decade of environmental litigation will not involve air and water pollution. It will involve land use and local zoning. It will be fought in the local parks and playgrounds by the homeowner and housewife. The fight will be to make the cities livable. Don't think that by moving out to the suburbs or farther, that you can escape the cancer of the core city. It will creep out sending fingers of corruption the length and breadth of this country.

What you should have been thinking about and should be thinking about is, how to create islands of clean air and water and viable diverse populations of plants and animals so that they can act as great healing poultices on the great festering sewers, namely the cities, so that they will send green fingers of hope back into core cities and the concrete jungles.

The time has come to do something! How much is relevant to the 18 year old voter and how do you get it to him? We can keep hoping that suddenly every citizen will be struck by the need to change his life style. We can hope until we choke to death on air we can't breathe or get buried under our own rubbish.

You had better figure a way to educate quickly. What we really need is ecologically sophisticated, environmentally responsible, socially relevant and politically feasible legislation. But how do we get it? Do we have enough time to wait for it? I know it's difficult to teach students of today. They demand relevance. But its got to be done. The whole purpose of litigation is education. First you educate the judge and the jury, and if you're dealing with a subject as broadly a concern as the environment, you educate the public.

You've got to reach the legislatures. It took four years to get across the DDT message. We don't have four years. You must consider litigation as a tool for public education. That doesn't mean you bring sloppy lawsuits where you waste money on procedural technicalities. The purpose is to get into court and "tell it like it is."

The war must be waged on a number of fronts. You conservation educators of this country determine how much ecology and conservation is relevant to 18 year old voters. You've got to make sure that voters twelve years from now have that information. At the same time you've got to figure out how to get that information across to the people that you have ignored or failed to adequately consider over the last twelve years, and you've got a very, very short time to do it.

ECO-TACTICS AND ORGANIZATIONS - AN ACTION APPROACH

Denis Hayes, National Coordinator, Environmental Action, Washington, D. C.

We face a most difficult problem, you and I. We are fighting for a set of principles in a society where we hold but a miniscule portion of the available power. When we raise our issues, we occasionally are lucky enough (or loud enough) to get a hearing from the real powers that be. If we have done our homework, and if we have a militant, impatient organization behind us, those powers that be will sometimes meet us part way. We define the least we will accept, they describe the least they will give, and we draw a line somewhere between these two points.

Sometimes the line is close to our demands. The Clean Air Act of 1970 is a case in point. The bill is dreadfully short of the demands first posed by the Coalition for Clean Air, but considering that we were opposed at every step of the way by Detroit, by the heavy metal industries, by much of the leadership of both houses of Congress, and the President of the United States, we managed to enact a reasonably tough bill.

Generally, however, we're not so lucky. A classic example was the battle last year to get DDT banned in Florida. It culminated in a compromise. Oh, DDT was banned alright, but with the following exceptions:

Except indoors;
Except underneath buildings, or within a foot of buildings, to control pests;
Except in emergencies certified by state health officials;
Except to control forest or farm pests where no safe and effective alternative is available;
Except for direct application on cabbage, corn, cotton, peanuts, soybeans, and sweet potatoes.

One is reminded of the classic question: "Well, except for that, Mrs. Lincoln, how did you enjoy the play?"

Just where is all this taking us? Our urban streets are exploding with ear-smashing noise--much of it caused by wrecking cranes destroying our heritage to make way for concrete and plastic monstrosities with sterile, stagnant rooms which must be vacated promptly at five o'clock when the air conditioning goes off because the windows have been sealed shut to keep out the smog and noise. Our streams are unswimmable, our

highways are clogged to a standstill for four hours each day, our food is grown in chemicals and sprayed with more chemicals and packaged in synthetic containers with a longer life expectancy than that of most of our office buildings.

Our welfare system isn't working. Our civil rights laws aren't working. Our public utilities aren't serving the public interest, and public officials are dying with their closets stuffed full of money. In short, things are falling apart. We're losing pride, and in the process we're losing our souls. It's difficult to inspire a new generation to greatness in a society that has no respect for itself.

There are a number of things being experimented with today in an effort to produce social change. I'd like to touch upon a number of them which have been employed by the environmental movement.

Most of the romantic talk about the youth wing concerns itself with the shenanigans of an elite few, domiciled in pastoral four-year colleges. The "young" are also filling the ranks of the army; they are also manning our industrial assembly lines, and having babies.

More than half the inhabitants of our slums and ghettos are sixteen or under--children whose ground is asphalt and whose sky is a smog-filled complex of wires and signs. How much drive do we hope for from a youngster whose whole environment has consisted of abandoned cars, abandoned buildings and abandoned dreams?

"Suing the bastards". This phrase has come to be popularly identified with Vic Yannacone, who proceeded me on this platform. There has been a good deal of right-wing complaining about the "permissiveness" in our society, and I must own up to being in partial agreement. We have been too permissive with our oil companies and our paper companies and our steel companies and our chemical companies. We should be taking them to court. We must take polluters to court, but I suspect that fines are not going to do the trick. The obvious alternative is prison. A fine is paid by a faceless entity called a corporation; the time has come to start assigning guilt to people. It is easy enough to locate responsible people. They are to be found on the boards of directors. These men are responsible for corporate direction, growth, profit; they should also bear the responsibility for corporate crimes.

I speak of prison not as punishment. Modern criminology is far beyond that! Incarceration today is for the purpose of "correcting" criminal or socially irresponsible behavior. Indeed, up-to-date people no longer call these places "prisons" but rather "correctional institutions".

Directors of corporations guilty of criminally disobeying environmental legislation are after all not heinous animals. They are simply products of their environments. They were subjected to an educational system which emphasized ever-increasing growth and ever-increasing profits as totally desirable things. They studied economics not biology, marketing, not public health. Some are incorrigible, one always finds bad seeds. But many of these men can be taught attitudes which would allow them to return and play a constructive role in society. A couple of months working the soil, studying ecology, and living in moderation, and they might be eligible for parole. Meanwhile, their corporations would have to be declared in ecological bankruptcy and turned over to a public board of trustees to be run in the public interest.

Another thing frequently suggested, is that if you find that you aren't very effective locally, you can appeal to the federal regulatory agencies, which are occasionally effective, especially under the new Environmental Protection Agency. They have been doing some good in parts of the country. Right now they have some 75 or 80 warnings out, on which, in a brief period of time they are going to have to either "put up or shut up". They are going to have to take people to court depending on what is being done within the next 30 to 90 days. By and large, the appeal to the regulatory agencies is not a very efficacious route. Willard Works once referred to regulatory agencies as "chicken coops built by foxes". I think that's rather descriptive for the kinds of people who influence the legislation which set up and provide the guidelines within which these agencies run.

Moving out of the governmental sector, some of the things that have been done, have been of a direct action nature, against corporations. These would include such things as stock proxy fights and consumer boycotts. Last year there were over twenty projects on corporate responsibility, which were taking on corporations over specific kinds of issues, surprisingly, the majority being environmental issues, and raising these issues at stock holders' meetings. This has merely been an interesting way of focusing attention. There have been a few voluntary changes made by management, but in terms of capturing control of enough stock holders to bring about a shift in corporate decision making, we have not pulled in any more than 5% of the vote.

Another attempt is the consumer boycott, which is occasionally a good tactic, but rarely successful on a national level. Perhaps after major oil spills we try a consumers' boycott against Standard Oil of California or Gulf Oil, but these have been notoriously unsuccessful. One reason why we are so ineffective against the large corporations is a simple matter of money. We can't come up with enough to go against them. When you talk about corporate advertising, with regard to any number of issues we have been raising, the outright lies that have been broadcast at costs of millions of dollars is outrageous.

A classic example is that of Standard Oil of California, which had a before and after picture of what F-310 does to gasolines in terms of giving you clean burning exhaust in your cars. The before picture shows a car with a large balloon filled from the exhaust pipe with all sorts of "grungy" material so that the balloon is absolutely black with pollutants. The after picture, with F-310 added, shows a clear balloon, which suggests

you should use only gasoline with the added F-310. What they did was to take a black balloon for the first picture, and simply replace it with a clear balloon for the second. To put some "frosting on the cake" they took both pictures in front of what they called their Southern California Research Laboratory facilities, which was actually in front of the Palm Springs County Court House, but they removed the sign with their photographs and inserted Southern California Research Development Laboratory--Chevron Gasoline.

Another example was that of Potlatch Paper Company, where they showed the beautiful river underneath their plant, and showed that this socially responsible paper company could put out paper and actually keep the environment in decent shape downstream from their plant. However, it was photographed some 50 miles upstream of the plant and downstream of their plant. They have just as much "crud" as most other mills.

Finally if you are going to try to bring people in on the boycott, you have to have some sort of alternatives to propose that are more ecologically sound. We just don't have the alternatives, at least not the ones that strike us as a meaningful counter-balance. I went to a grocery store about eight months ago, to look at the alternatives in terms of household detergents. On the shelves I found: Action, Vel, Cold Power, Punch, Palmolive, Surf, Biz, Bonus, Sure, Dreft, Drive, Amaze, Duz, American Family, Joy, Ivory, Dove, Purex, Fels, Clorox, Cascade, Silver Dust, Breeze, Oxydol, Ajax, Rinso, Lux, Salvo, Fab, Wisk, Cheer, Bold, Dash, All, Tide, and Tide-XK, which would lead you to believe that our consumer society is provided with some sort of alternatives. However, if you look into it a little more, you find that all these brands, except two, are manufactured by three companies, Proctor and Gamble, Colgate-Palmolive and Lever Brothers. The marginal differences in all of these is simply the addition of miracle ingredients.

Another category would be individual acts of protest. Saving your newspapers and bottles may be of great importance to you in terms of your own individual ethics, how you wish to relate to your world, but it is of marginal utility to society unless you use it as a tool for either education or organization. Friends come over, see a stack of newspapers, mention them, and you explain. Arrange a car pool with your neighbors so that one of you has to collect papers only once every three or four months. The answer here of course, must eventually lie in systematic institutionalized response, such as newsboys' pick-up and bottle garbage disposals.

If there is a hero of the contemporary eco-activist world it is probably the individual harrasser known as "The Fox" in Wisconsin. He's the one who takes the "gunk" out of the sewers and pours it all over the corporate offices and strings up banners along the railroad trestles. He has not yet been caught, but has been interviewed several times. These are all good things in terms of generating publicity and accomplishing some educational ends. In terms of effectively addressing the problem, in bringing pressure about for a change, he is an anonymous person who does not have any organization and does not bring about any pressure, and we have to have a lot of people who are willing to go beyond that, to engage in those kinds of activities which will focus attention on acute problems and work for the remedies to them.

Another area of involvement is electoral politics. To the extent you have a meaningful choice, this is a worthwhile investment of energy. Seldom is there such a choice. Do you go for LBJ or Goldwater? Neither Nixon nor Humphrey excited any of my friends very much. Popular attitude was "Thank God only one can win".

Prospects on either the Republican or Democratic side don't look too promising for 1972, with one glaring exception. This exception is Henry "Scoop" Jackson, who is running for the presidency, and seems to have quite a bit of support among some conservation circles, which upsets me. He is running largely on the grounds that he is an environmentalist. As Nixon's first choice for Secretary of Defense, Jackson's credentials with the peace movement are nonexistent. As a consistent advocate of building up our storehouses of nuclear-tipped missiles his credentials among those seeking to avoid nuclear holocust are nonexistent. He has no reputation as a champion of the underprivileged, or minority groups, poor whites, or the elderly. He has not spoken on health care, or the urban cities. So Mr. Jackson has decided to run for the presidency on the grounds that he is an environmentalist.

This course may not prove to be as easy as Senator Jackson might think. A great many of us remember full well his authorship of the Timber Supply Act, where he once again acted in the behest of industrial interests in his state. We will bear in mind his utter lack of leadership, as Chairman of the Senate Interior Committee, on such key issues as the Trans-Alaskan Pipeline and a large number of ill-advised Corps of Engineers projects.

But for as long as our political system is viewed as legitimate, it remains our strongest counterbalance to the forces who are presently pushing for environmental rape. If there aren't good candidates in a race, for whatever leval office, then we have a responsibility to find new candidates. So long as our political institutions remain dominated by geriatric racists and spineless opportunists in the grips of their major campaign contributors, our chance of any significant, orderly, national change are nonexistent.

The final area closely related to electoral politics is the lobbying game, that of passing legislation. If you are talking about economic interests that have the capacity for impact on the legislation process, the most influential is the military-industrial complex. The money that's being poured into defense out of the Federal Government is such that they have built up a series of incredible powers.

The highway lobby is simply described as all of those people who will get richer if they continue to build highways. They have succeeded in setting up a highway trust fund which can be used only to build more and more roadways. Each year it is renewed by gasoline taxes, tire taxes, trailer taxes, and taxes on almost all the automobile accessories. Last year it totaled 5.5 billion dollars.

This society seems to be able to countenance only about two social issues at a time. If environment is a fad it will be our last fad. Time will pass us by, except as we have institutionalized something to carry on our values when the media begin to ignore us. Environmental education must be carried on in all fields.

YOUTH PANEL - William Bryan, Moderator

The youth panel of high school and university students stressed that as youths, they wanted to be recognized, not as a group, but as individual human beings. They felt that there is no generation gap per se, but only gaps between: those unconcerned with the future; those concerned but not acting on their concerns; and those who are concerned and committed toward finding a liveable future.

Youth was defined as the concerned and committed generation following three major action trends. The first trend is focused on acting, even for the sake of acting, which frequently becomes a diversion from reality and masks the basic issues. The second emphasizes being more understanding of man's need for love and faith in his fellow man. The final trend is the counter cultural approach or ecological ethics involving life-style experiments.

A general "rap" session involving the panel and audience discussed the above points. Although few conclusions were drawn, it was evident that those present recognize that man's relationship with his social and natural environment is on a collision course with disaster, and that they are concerned and committed toward inventing a livable future.

RESPONSIBILITIES OF THE INDIVIDUAL - A LIFE STYLE APPROACH

Spenser Havlick, UM School of Natural Resources

Eighteen months ago this nation was on a fever pitch about the environmental movement. Environmental teach-ins centered around Earth Day and the mass media splashed the problem across the front pages. Certainly that emphasis produced some awareness of the delicacy of man's life support systems as he rides this spaceship earth. The alarm sounded by the middle and first class did not reach the grassroots of America.

I propose that you look upon the cities as a second echelon natural resource which is in serious need of management.

Do you see the yellow light? We may be at an environmental intersection. Some of you see a green light and are ready to charge full-speed ahead because you have faith in the free enterprise system and faith in the ingenuity and imagination of man. You think everything will be just fine if you proceed at the same rate of speed you have been going. Others of you may be at that same environmental intersection and see a yellow caution light. You have a choice whether you should gun it or slow down and look things over. Another group of you may see a red light and come to a screeching halt and say that this spaceship is in perilous shape. If our attitudes and behavior do not change this will be an unlivable planet. A city is a very recent invention, having been around only eight or ten thousand years. A city is very much like a biological organism and we have had other such orgamisms which have not done so well.

The environmental problems have been clearly defined especially since the teach-ins and during the past five or six years. Some of the agencies of the local, state and federal governments have yet to rearranged to deal with these problems in terms of how we really manage our natural resources. After all official details have been worked out there is still something missing. There seems to be a lack of zeal and deep personal motivation to make all the radical changes in the values reflected by the individual over-consumption.

I believe there is a restlessness among those who teach conservation or who work in conservation agencies and organizations. There are inconsistencies between what we are doing and what we are saying. In a questionnaire answered by local CEA conferees the following responses were given:

50% have had pesticides in their home
68% would not take a bus given the choice
41% burned their trash
20% didn't know if their city had a waste treatment plant
20% didn't know if their city had an air pollution ordinance
48% had no air pollution devices on their cars
75% relied on throw-away containers

A year ago President Nixon said, "Our government has moved ahead to improve our environmental management, it has been heartening to me to see the extent and effectiveness of citizen concern and action, especially the commitment of the young people to the task." I am anxious to hear what the president says about the depth, extent and effectiveness of citizen concern one year later. The prospects look rather dismal.

Environmental coalitions formed a year ago are struggling. The Federal Government has had a difficult time in making state and local monies for air and water pollution control programs. Ecology centers are fumbling, some are closing down. Procedures for dealing with environmental impact statements are in shambles. Did you

realize that most no-lead or low-lead gasolines are selling very poorly? Do you see the yellow light?

More than anyone else, the proponent of conservation education should be put to the test of consistency. What are environmental educators doing that suggest to the people who are looking at us, a form of consistency in our life style? Performing even the most modest needs and exercising the most modest deeds of environmental stewardship in your life style can begin ripples which eventually make waves.

Lots of ripples are waiting and needing to be made. Maybe it's your turn. The recent crest of the conservation movement has provided inspiration for those who had serious doubts. Think of the pilot project for recycling solid wastes or organic gardens. Organizations are mobilizing for effective environmental action. However, out of necessity and personal priorities, most of us operate best at the individual level. We all are aligned with groups and we throw our memberships into too many groups. That's where we feel the real force of our impact is. Yet, what kind of a life style do we bring in to make a difference in the very organizations in which we participate?

We need to set our environmental life style in order before we attack business, industry and government. How do we score on daily necessary energy consumption? Do we use car pools, herbicides, have natural lawns, or use rainfall for irrigation?

One of my proposals for those of you involved in schools is to have you carry out an environmental impact study of your school. What is the school doing in its local environment? What about incinerators or recycling paper? Is the sawdust from the woodshop being burned or sent out to be used as mulch? This is important because once the students become involved they take their involvements home. I suggest you create teams to investigate and diagnose local problems, and then look for alternatives for bringing about environmental change Form a team and carry out an investigation that will help you to identify the five worst polluters in town. Get some help from the health department, air pollution control and other agencies. Identify them publicly, but don't be nasty. In addition identify the five agencies who are employing the most ecologically sensitive procedures.

If you return home and feel the situation will take care of itself, things are in very perilous shape for generations to come.

Besides the population problem in our country, another serious problem is the amount of over-consumption. What does that mean to the tremendous natural resource called cities? These cities are becoming tremendous energy sinks, with all the materials being poured into a concentrated area. We don't recycle that. As more and more people go to cities we are urbanizing at an accelerating rate. 73% of the people live in cities now, and within the next fifteen years, 85 to 90% will be living in this small container. The life styles are going to depend on the support system of the primary producers who are logging, mining and farming.

One of the real hopes is with the young people who are willing to experiment with a different kind of life style, which has as its objective a reduction in consumption.

What we need to do is improve the quality of life. On an individual basis, for every purchase we make or act we perform, we can ask, "How does this improve the quality of life for ourselves and our fellow man?" This is going to be difficult and time consuming. I would like to see this nation begin to cast its dollars as votes in the supermarket, for products which improve the quality of life. Every vote we cast in the market place should be seen as a lever of change. If you have to boycott, do it!

There are many fronts in the conservation area waiting for us to proceed. None can be undertaken effectively unless the individual commitment is deep and portrays a life style that sends out the same message.

FIELD TRIP - DETROIT AND DOWNRIVER AREA INCLUDING: DEL RAY, ECORSE, RIVER ROUGE, GROSSE ISLE - James Swan

This field trip examined a number of air and water pollution problems in the Downriver Detroit area, and some of the attempts to resolve these problems. After discussion of the nature of air quality and water quality in the area, we visited sites and spoke with people to view first-hand technological, political, economic, and social factors involved in resolving area problems. As we examined the problems and explored them with area residents, it became obvious that there are no simple, easy solutions, but rather each of the problems needs its own special remedy, which is usually a combination of economic, political, social, and technological factors. Perhaps our strongest realization was the need for developing dedicated, concerned, honest, and well-educated citizens from all walks of life to work collectively on these problems. Only through tremendous dedication, patience, and conviction will the Downriver area be returned to the community which once was almost chosen as a site for the United Nations Building.

ENVIRONMENTAL FIELD TRIP - Spenser Havlick

Leaving Ann Arbor the group voted to concentrate on three major opportunities the city offered. It was decided to do a cross section analysis of the Detroit area to show urban evolution from the central business district to suburb and industrial areas. The second task was to observe urban renewal efforts and the ghettos and riot areas of inner city Detroit. A third task was to observe the impact of an industrial corridor on the aquatic, terrestrial and atmospheric environment of the Detroit metropolitan area.

A mid-day pause was spent in Greektown, one of the last ethnic enclaves in the center city with a comparison of life and the new high rise urban renewal project of the Lafayette East sector. At the mouth of the Rouge River, local consultants briefed our groups on industrial pollution problems in the communities downriver and downwind. Emphasis throughout the day was on ecological impacts of urbanization as they affected the residents and their natural habitat.

FIELD TRIP - TOLEDO - Bill Stapp

The major purpose of this field trip was to view the inner city environment and to discuss the role of education in developing a citizenry that is knowledgeable regarding their environment and associated problems, aware of how to help solve these problems, and motivated to work toward their solution.

The focus of the field trip was on the inner city environment of Toledo. The group leader was accompanied on the trip by Mr. Roger Braker and Mr. Wilky Hodge.

Upon entering the Toledo environment attention was directed to transportation patterns, air and water pollution, recreational facilities, solid waste disposal, energy sources, waste water treatment, and urban blight.

The major focus of the field trip was on the model city sector of the city. The group had an opportunity to react to presentations by one of the model city directors, a private developer, and a neighborhood block worker. Each presenter had a different perspective of ways of resolving core city problems.

The group leader has been working with the Toledo Board of Education over the past year in developing a comprehensive environmental education program. The approach advocated by the Toledo Board of Education was presented and discussed by the participants.

The trip proved to be provocative and meaningful for both the participants and presenters.

FIELD TRIP - ENVIRONMENTAL PROBLEMS - Diane Drigot

A recurrent emphasis throughout the CEA Conference was on the pressing urban environmental problems of the day, and how citizens can organize themselves to work on solutions. There was a whole day devoted to bus tours of metropolitan Detroit with the above theme. One of them, guided by Bill Bryan, Diane Drigot, and Wally Reutsch focused on the citizen-organizations' role in the resolution of urban environmental problems. We visited and discussed strategies with organizational representatives along the route.

The first was the "Rescue the Rouge, Inc." This Coalition of environmental and civic associations in the Detroit area has mobilized about 1,000 citizens on each of two annual clean-up drives along a 10-mile stretch of the Rouge River. A group of veteran sportsmen, university and high school students, scout leaders, city teachers and community leaders has spearheaded this Coalition as a means of arousing the active concern of the local citizenry for long-range planning in the entire watershed. They are next uniting efforts with similar clean-up groups throughout the watershed to get a basin-wide committee to work on problems of their mutual concern. For example, flooding as generated by excessive runoff from overdeveloped floodplains; litter and log jam accumulation in the riverbed; and periodic combined sewer overflows from the inefficient Detroit sewage system. They want to obtain root-level solutions to these problems; for example, more conservation-oriented use of the floodplain that both minimizes the flooding and maximizes the recreational potential of this heavily urbanized watershed.

The second major citizen-action area visited was the heavily-industrialized "Downriver" portion of the Rouge, where it empties into the Detroit River. We talked with a social worker who works for the Downriver Anti-Pollution League of the U.A.W., about the difficulties of securing citizen participation in solving pollution problems when job security, adequate housing and police-community relations may be of more immediate concern. This representative began to work with DAPL as a student-intern while completing studies at the University of Michigan. Similarly, student groups from the University School of Natural Resources have been offering technical and organizational assistance to this citizen-organization in the form of interdisciplinary team projects. One of these was the investigation and subsequent exposure of the inadequate communication and responsiveness to citizens on the part of the Wayne County Air Pollution Control Division. Another was to prepare and distribute a map of particulate fallout in the Downriver area so that residents could get an accurate picture of the situation. Presently, students are working with DAPL on the development of a power base in the community so as to launch an effective appeal to industry and local government for remedy of the situation.

ROLE OF THE STATE ENVIRONMENTAL EDUCATION CONSULTANT

Co-Chairmen: John Pager, U. S. Forest Service, Milwaukee, and David Engleson, Environmental Education Coordinator, Wisconsin Department of Public Instruction

State Environmental Education Consultants discussed their assignments and how they attempt to complete them. In general they agreed to the following responsibilities:

1. Work directly with school districts, teachers, administrators and other groups interested in environmental education.

2. Try to develop and implement a statewide environmental education program, K-12.

3. Try to develop curriculum materials, K-12.

4. Provide in-service programs.

5. Work in cooperation with Department of Natural Resources, Forest Service, and other concerned agencies.

6. Stimulate involvement and help plan outdoor education programs.

7. Co-sponsor conferences.

Suggestions included:

1. Regionalization of efforts within a state.

2. Regionalization of CEA with environmental education consultants as regional chairmen.

3. Work closely with state environmental education organizations, using their teachers and members at conferences or other opportunities for teachers to discuss implementation of environmental education activities in their teaching.

4. Develop the strength of CEA by accepting the responsibility of helping others so that each individual does not have to learn the hard way, making the same mistakes and overcoming the same obstacles that the others have done.

THE OPEN CLASSROOM APPROACH TO ENVIRONMENTAL EDUCATION FOR INNER-CITY YOUTH

Joseph Hassett, Wave Hill Center for Environmental Education

Environmental education must be a total educational process making use of natural and man-made environment inside and outside the classroom on an everyday basis. It should make the child sensitive and perceptive of his environment, and help him realize that he is part of nature. The child must be taught to think, decide and accept consequences. He must be an active agent.

Learning must be a part of living, combining freedom and responsibility. Capitalize on the child's interest by using material from the environment. When interest arises think of all the possibilities inherent in that interest.

The Wave Hill elementary school program has a two-fold purpose. The first is to get children interested in the environment, the second to get them "turned on" to education in general. Special features of the open classroom include a relaxed informal atmosphere, an opportunity for children to teach one another, vast materials for experimentation and thoroughly trained teachers.

Teacher training consists of a weekly two and a half-hour session for a semester, plus trained classroom assistance. Students come for field experiences and take with them many unresolved questions; thus the flow is from indoors to outdoors each feeding into the other.

Teachers and students keep logs and care is taken to foster each individual's progress in basic skills. As the child becomes active and involved in the learning process he should also become aware that he an "agent of change" to make the various environments better.

The results have been gratifying. The sponsoring Ford Foundation has renewed their grant, and several large New York school districts now speak of the program as "ours".

DEVELOPING STATE ENVIRONMENTAL EDUCATION PLANS

Joseph Chadbourne, University School, Chagrin Falls, Ohio

Discussion centered around the number of states having completed Environmental Education State Plans and funded proposals under PL 91-516, Environmental Education Act. A great deal of dissatisfaction with the United States Office of Education's handling of PL 91-516 was expressed. A number of participants testified to receiving answers to questions concerning PL 91-516, only to have something entirely different occur. The first draft of a publication, Guidelines for Environmental Education Planning in Wisconsin, Douglas Jordan, Center for Environmental Communications and Education Studies, 602 State Street, Madison, Wisconsin 53702 was discussed. The publication was described as "a plan for how to plan." It was urged that in planning future conferences, that adequate time for identifying and dealing with current issues be reserved, preferably early in the conference. Resolutions then might be developed for consideration at the annual meeting.

ROLE OF CITIZEN AND CITIZEN ORGANIZATIONS WITHIN THE POLITICAL PROCESS - LEGISLATIVE APPROACH

Douglas Scott, Projects Coordinator, The Wilderness Society, Washington, D. C.

I'd like to talk about the role of the citizen. The reason that this is such an important subject is that too often environmental action has been interpreted as being legislative action. Until quite recently, this has been how the history of the environmental movement has been written.

It is certainly true that this is one of the most important forms for action in the establishment of strong environmental protection devices. It is certainly worthwhile to consider what we must do to build a movement that is stronger and better equipped and more effective at putting its resources to work for legislative action. Basically speaking, our past record for passing environmental legislation at the Federal level has been good. But we cannot rest back on our laurels saying, "Yes, we've done good work". We have so much more work to do, that we cannot afford the kind of slow-pace, sloppy, ineffective legislative action we've had in the past. We've got to become more clever, better organized, more widely based, cover a wider scope of issues, watchdog the legislature, and understand the role of legislation.

To do this, I think we have to talk not about environmental legislation, not about the tactics of how you or your students can become a great environmental lobbyist, not about how to write a good letter, and not how to get rid of the "bad buy". We have to talk about how we can be on the cutting edge of revitalizing the legislatures of this country, as the leading institution of our government, which they are not today. We must also talk about how we can revitalize the interest and involvement of citizens in their legislature, so that the public interest, as opposed to special interests, is dominant in the legislative forum. These are the questions that we as educators and leaders in the environmental concern must ask ourselves.

I think it can be said that the political life of our country is in terrible trouble. It's at one of the lowest ebbs in our whole existence as a nation. It's gotten to the point where the average teenager doesn't even give it a chance to work. They aren't even willing to go the one step to be turned off anymore. This is no longer an institution, a way of governing people, that makes any sense.

To my mind, that is one of the biggest tragedies our society faces, because above all the legislatures were intended to be and can be the point of access for citizens. That's the idea of a representative government. If we had a great enthusiasm for the environment, and if there is a widespread demand to do something about the environment, the bureaucrats are not going to solve the problems; neither are the courts. The legislatures will. In view of the magnitude of the environmental crisis, in view of the magnitude of the changes we must bring about, the terribly low ebb of legislative skills and understanding and respect in our society is absolutely tragic.

It's all the more tragic when put in the following perspective. If you have been involved to the point where you have been a part of a legislative battle or action, you suddenly discover that it's "child's play." The legislatures are ready to be responsive to leadership from citizens, and legislators as a group, are an extremely competent, extremely public spirited, extremely eager to be effective, group of people. The legislators are also the most frustrated people because they can't do their job, because we have not done our job as citizens and citizen organizations, to give them the power that they need.

By and large, it is not the problem of poor legislators, poor processes or structure, all of which need reform, but the basic problem is that we don't know anything about how legislators work. We have very little sense of responsibility of our role as citizens in legislative action, and most tragically we aren't doing a thing to involve the coming generation in the one form of government where they can have an effective role.

Personally I don't think that you are serious as environmental educators if you don't get out of the classroom and get out of the woods and get your students involved. If you don't, who's going to? And how are you going to do this, if environmental educators are not themselves, models of involved, dedicated, activist citizens?

It does no good for the inner-city child to spend an hour in the out-of-doors if he is then taken back to the inner-city and given no way to relieve his frustrations constructively.

I don't think we can be surprised if the eighteen-year-olds don't register, and don't vote. We've brought it on ourselves, by simply not showing people the way. The knowledge of how our political-governing system works doesn't come in civics courses or textbooks, or parchments displayed in the National Archives. It's a human system. It works by human means, the means of effecting it, persuading it and making it responsible to the public. Building power, using power, being persuasive, knowing how to communicate--these are the skills that people have to learn. Yet we are brought up from cradle to grave on the great myth that we had wise and far-seeing founding fathers, who understood all the evils of the world and realized they could build a governmental structure that would be instantly responsive. We are sort of led to believe that ours is a magical system, the best on earth, where as soon as 51% of the people agree the government will follow course. That's absolutely phony. We have to work at it. We can't sit on the sidelines. We must become involved. It takes hard work and experience. If you don't become involved politically then you're not serious about environmental action.

You must involve the people you affect as leaders on the forefront of the environmental movement. We do not want to be another pressure group. We must revitalize the public's recognition that legislatures are its best points of access in opening up the system and getting action.

The legislature is a group who would grow into being representative of public interest, if the public gave them half a chance. Citizens must understand the principles of the issues, and know how to communicate, broaden their base and have effectiveness. The basic technique for this is becoming involved yourself, involving your students and encouraging them. Let them learn by making mistakes, by trying and by striving. That's what learning is all about.

YOUTH ORGANIZATIONS

Gerald Schneider, Environmental Education Consultant

The panel of youths suggested that adults listen more carefully to youths and have faith in their abilities. Adults working with youths should be resource persons and not leaders who "tell kids what to do". Youth leadership training results from youths working out problems themselves, rather than repeating the good and bad of anyone's advice. Adults may share in the work of the youths as unobtrusive co-workers. The secret of success in youth organization is to have the youths running it.

The Youth Attitude Inventory was returned by 115 persons, the median age was 42, in a range of 14 to 70. A summary of the views of those over 18 follows:

Ecology is not just a passing fad with the youth.

Adult direction is needed.

Today's youths are mostly responsible and serious.

Youths are genuinely concerned about solving environmental problems.

Organization youths get into less trouble than youths in general.

Youths do have respect for their country.

Adults over 26 felt youths could accomplish their ends working through "the sytem". Adults under 26 doubted this.

Youths don't protest for its own sake.

Youths do know what they want.

Today's youths are better educated than their parents.

NATIONAL YOUTH ORGANIZATIONS AND THEIR PHILOSOPHIES
by Gerald Schneider

BOYS' CLUBS OF AMERICA - Serves boys ages 6 through 13 largely from lower socio-economic sections of cities. Its general purpose is to provide behavior guidance and to promote the health, social, educational, vocational, avocational and character development of boy members. Activities are offered daily in a building set up for such activities. A professional staff supervises programs.

Because its boys live in cities, particularly in the inner-city, there is a special concern about the effects of environmental blight and compacted living conditions. Their quality of life is directly affected by such things as poor sanitary services and inadequate recreation areas. Congestion, pollution and environmental deterioration combine with bad nutrition and bad health to adversely affect the boys. Boys' Clubs strive not only to overcome these shortcomings, but to provide encouragement, incentive and experiences designed to show youths how they can effectively influence the quality of their lives.

BOY SCOUTS OF AMERICA - Serves boys ages 7 to 10 in Cub Scouts, 11 to 21 in Boy Scouts, and 14 to 19 in Explorer Scouts (which may also include girls). It attempts to supplement and enlarge established educational facilities for activities in the out-of-doors, to better develop physical strength and endurance, self-reliance and powers of initiative and resourcefulness, all for the purpose of establishing the very highest type of American citizenship. A professional staff services troops led by adult volunteers.

Conservation activities are expected to teach boys that natural resources are vital to boys personally and to the future of their country and their way of life in a democracy. Through conservation activities, boys should develop an understanding of their interdependence with their environment. They should also understand their responsibilities as citizens to contribute to the development of a better environment in which to live. Through boy involvement, these activities should lead to concern for the quality of the environment. It should also motivate action programs by boys to improve the environment.

CAMP FIRE GIRLS, INC. - Serves girls ages 6 to 8 in Bluebirds, 9 to 11 in Camp Fire, 12 to 13 in Junior High, and 14 to 18 (or high school graduation) in Horizon. It encourages love of country and the development of responsible citizenship; application of spiritual and ethical ideals; preparation for the multiple roles of a woman's life; service to home and community; good physical, mental and emotional health; interest in nature, conservation and outdoor living, awareness of the adventure in daily life and respect for and appreciation of human differences. A professional staff services groups led by volunteers.

It is especially committed to a belief in the preservation, development and wise use of human and natural resources. Along with improvement of the environment, Camp Fire Girls have reaffirmed their interest in elimination of prejudice on the basis of race, religious beliefs or national origin; improvement of methods used to cope with social ills and opportunity for individuals to influence decisions that affect their lives.

4-H - Serves girls and boys ages 9 to 19. Its general aim is to help youths become creative, productive and responsible citizens. This includes youths of all socio-economic, ethnic and cultural backgrounds from urban and inner-city as well as rural areas. Through projects as members of 4-H Clubs, participation in special interest groups and more recently, through a 4-H television series, young people are taught science and technology, experience personal growth and development, develop citizenship competency and expand leadership potential. Major program areas include Leadership, Citizenship, Agricultural Production, Family and Home Living, Careers, Conservation, Community Development, Arts and Leisure, Health and Safety, International Development and Personal Relations. A professional staff from U.S.D.A. Extension Service personnel at Land Grant Colleges services clubs led by volunteers.

4-H environmental-education stress today focuses on action projects for environmental improvement, providing leadership in environmental efforts by local groups, career exploration in environmental fields and encouraging employment in conservation fields.

FUTURE FARMERS OF AMERICA - Serves boys and girls ages 14 to 21. Developed to strengthen the instructional program in vocational agriculture. Provides a "laboratory" for practical training in agricultural leadership, cooperation and citizenship. Through its activities, students learn how to take part in business meetings, communicate, speak in public, buy and sell cooperatively, finance themselves, solve their own problems and assume civic responsibilities in connection with agribusiness. There is a stress on development of wholesome American ideals, outlook and spirit. Chapters are led by professional vocational agriculture teachers in cooperation with the Office of Education of the U. S. Department of Health, Education and Welfare.

Besides inclusion of conservation in agricultural training, stress is placed on community development activities by chapters. These include beautification, wildlife habitat improvement, park development, litter campaigns, tree planting, erosion control and other environmental projects. These are tied to learning more about a community's resources and opportunities for jobs in agribusinesses.

FUTURE HOMEMAKERS OF AMERICA - Serves girls and boys in junior and senior high schools who are home economics students. It functions as an integral part of the curriculum, providing a framework for youth-planned and youth-directed activities that extend and enrich learning. The overall goal is to help individuals improve personal, family and community living. Chapters are led by professional home economics teachers in cooperation with the Office of Education of the U. S. Department of Health, Education and Welfare.

Environmental education falls under several of the projects included in the "Program of Work" for students. It is an integral part of such programming. Students engage in the same kinds of activities indicated in the second paragraph under Future Farmers of America.

GIRL SCOUTS OF THE U.S.A. - Serves girls ages 7 and 8 in Brownie Girl Scouts, 9 to 11 in Junior Girl Scouts, 12 to 14 in Cadette Girl Scouts and 15 to 17 in Senior Girl Scouts. There is one program for all girls based on a "Foundation" that permeates activities related to the arts, the home and the out-of-doors. This Foundation, the

essence of Girl Scouting, comprises six interrelated elements: Girl Scout Promise and Laws, service, citizenship, international friendship, health and safety and troop management. A professional staff services troops led by adult volunteers.

Girl Scout environmental education activities including conservation, natural science, and outdoor recreation nurture the foundation elements by helping girls to develop appreciation of nature through enjoyment and adventure, learn outdoor skills and knowledge that build individual resourcefulness and self-reliance, accept personal responsibility for ecological living and foster physical, mental and spiritual health and strength.

There are national youth organizations such as the YMCA, YWCA, WYHA, Girls Clubs of America, Red Cross Youth and others that are not included here because of lack of space. They are no less important than the groups mentioned. The sampling of groups given should be sufficient, however, to understand the different kinds of emphasis given by different youth organizations to youth needs.

COLLEGES AND UNIVERSITIES

Clay Schoenfeld, University of Wisconsin, Madison

There is a considerable national interest in problems of higher education. As a subset of this interest, considerable attention has been directed to the concerns of inter-disciplinary studies as they relate to environmental problems. Articles have been written and surveys have been taken regarding colleges and universities which are attempting to provide some response to the demands of society and students for relevant environmental programs. At this stage many schools are planning or have environmental studies programs organized and operating. Even among those schools that have a history of working with inter-disciplinary programs there is a need for greater understanding of the problems and opportunities that exist in environmental studies and particularly as they relate to priorities for actions with the next few years.

With all that has been written and produced about the subject, there is precious little that deals with the genesis and operation, success and failures of existing programs. Even less is there any significant effort to respond to environmental issues on university and college campuses.

GENERAL PUBLIC, INFLUENTIAL CITIZENS AND POLICY MAKERS

Joan Wolfe, West Michigan Environmental Action Council

The council was organized in February of 1968 by Joan Wolfe, who had been very active and worked with several conservation organizations and knew some of the problems of these organizations in trying to be effective. The purpose of the council is to help organizations already committed to environmental causes, pool information and find more effective means of working together, as well as to get other individuals and civic and social organizations involved. The council has grown to include 75 organizational members throughout the state.

The council has been most successful in arousing and educating many organizations on environmental problems. For example, the council asked Dr. Joseph Sax to write a bill which would give the citizen better avenues for protecting the environment. The research and work involved resulted in aiding the passage of the Environmental Protection Act of 1970. The council provided the leadership in passing the bill, and kept the organizations informed.

Another example of how the Council operates is that when it ordered an in-depth study of the detergent question, it went to one of its organizations, Home Economists in Homemaking, and requested that it take on the project of researching the problem. This group, composed of home economics graduates, which performed some thorough research. It interviewed scientists, read hearing reports, got in touch with EPA, and read reports from industry. This research resulted in a pamphlet put out by WMEAC, The Detergent Dilemma. The careful method of study of the problem is an example of how WMEAC maintains credibility with its eighty-three member organizations and the public.

HOW TO START AN ENVIRONMENTAL ACTION COUNCIL

West Michigan Environmental Action Council, 822 Cherry St., S.E., Grand Rapids, Michigan 49506

Form an ad hoc committee of a few people to make plans

Find funds (from a Foundation, organizations, etc.), to

Hold a very special dinner at a place which will be an attraction to people who are already very, very busy.

Invite: Presidents of all your area conservation organizations, college Presidents or heads of natural resource departments in your local colleges (or biology departments), presidents of large or active local civic organizations, such as PTA councils, Jaycees, Garden Clubs, Kiwanis, League of Women Voters, University Women, etc.

Invite a really good speaker to explain ecology and the importance of the environmental crisis. Be sure to research your speaker - Remember that you are trying to attract busy people who may not be particularly interested in the environment. Get someone to speak who hasn't already been heard by most of the community, preferably someone from outside the community to lend prestige to the event.

At the dinner tell everyone why it is important to work together, etc. Assure them you will be working (check this out ahead of time) with biologists, etc., from local colleges, with the scientific community; that the Council will never speak on behalf of a member organization unless requested to do so; that the Council is a means for everyone to communicate with everyone else, so that when one organization or group discovers a problem or information it can be brought to the attention of the others, so that everyone can be more effective and informed.

Have a questionnaire ready for people at the dinner meeting asking whether they will support a council by sending a representative to the next meeting, what problems their organizations may already be working on, etc.

Announce a public meeting and the speaker. At the public meeting suggest a few specific problems and ask if people will sign up to study and work on them...Get them into specific groups, if possible, with chairmen chosen ahead of time. Have each group decide when to meet to work together on the problem they have decided to work on. Publish these dates in the paper if you wish. Keep the news media informed.

At the first public meeting, have by-laws to hand out. Say these will be voted on at the next meeting, and that if anyone has amendments to make they should be handed in ahead of time, in writing. At the next meeting vote on the by-laws in a package; don't get bogged down...You may also vote on the by-laws at a board meeting instead.

At the first public meeting the temporary chairman should appoint a three or five-member nominating committee made up of representatives from three to five organizations of varying kinds. (i.e., a conservation group - League of Women Voters - Kiwanis - a Union - PTA Council). The nominating committee could be "the presidents or their designated representatives."

A NEW ROLE FOR AMERICAN EDUCATION - A NATIONAL STRATEGY

George Lowe, Environmental Education, U. S. Office of Education, HEW

We have failed to make environmental education an integral part of the school system. We have a great challenge ahead of us. It's a challenge of an intellectual nature. In the next few years we have to devise programs to change contemporary behavior toward that which is more ecologically sound. We've got to make ecological concepts the basis of a new higher learning.

Where do we turn for some deep, intellectual insights? One place to turn would be the viewpoints of Carl Quigley, History Professor at Georgetown University. He suggests, "Environmental pollution is the movement of objects by human action from places or conditions where they are natural or unobjectionable to places or conditions where they are unnatural, objectionable and injurious. Environmental pollution is an accelerated problem by which man violates the quality and ultimately even the possibilities of human life."

Professor Quigley believes there are four phases of increasing degrees of pollution.

"Phase one; Amenities and aesthetic qualities of life are violated." A can of beer in the icebox is fine, but an empty can on the White House lawn isn't. We've had this type of pollution for a long time. Just look at any of our roadways and you find a great deal of aesthetic pollution.

"Phase two; Injury or death to individuals from environmental pollution." For example, the spraying of DDT to kill insects. The birds eat the insects, and in turn they die.

"Phase three; Whole species are threatened with extinction from the disturbance of ecological relationships." For example long chains of life; man, beef, grass, worms, bacteria.

"Phase four; Fundamental cycles in the biological pyramid and its natural environment are destroyed or distorted to such a degree that life for a whole series of living forms becomes impossible over wide areas and possibly over the entire earth." This occurs when we affect the heat cycle, the CO_2 cycle, or the hydrological cycle. He suggests that we look at the substantive intellectual problems in these areas.

The Great Depression of the 1930's showed a bankruptcy of accepted economic thought, and the current environmental crisis has shown us the bankruptcy of the educational system. The educational system of today is

being forced by the ecological crisis to turn from its existing specialized, analytical, materialistic, quantitative approach, toward a more wholistic, contextual, and qualitative approach. It is worthy of note that the existing specialized university departments have very little to contribute to the dominant problems of today such as war and peace, environmental pollution, economic backwardness, mental ill-health, urban violence and crime, ghetto poverty and youthful dissention. Why? Because these problems fall between the special academic departments.

Where are we going to get the funds that this intellectual Renaissance demands? You should get them wherever you can beg, borrow or steal them. You should probably redirect existing programs. You've got to find new sources, be ingenius. Too often society substitutes dollars for ingenuity. We're back to a phase where we have to be ingenius.

What is the organizational task? We've got to build a broad base coalition to help insure the success of the Environmental Movement. Conservationists and conservation related groups will have to make peace among themselves and join with the new ecological and environmental groups. We must institutionalize with school systems, while public interest is high and use all the school resources as well as nonformal aspects of education.

What should our strategy be? We should support local environmental education programs. Help communities define and resolve local environmental problems. The Conservation Education Association must take the lead. Speak with a unified voice on regional, state and national issues. Why can't you propose a White House Conference on Environmental Conservation for 1973? I think it's time to push.

We have a sense of time pressure. We don't have 20 or 30 years necessary for educational ideas to creep or seep into the curriculum.

Often times we find wisdom in the humanities rather than in science and technology. T. S. Elliot wrote "We shall not cease from exploration and the end of all our exploring will be to arrive where we started and know the place for the first time."

We find in Jeremiah 2:7, "I brought you into a plentiful land to enjoy its fruits and its good things. But when you came in you defiled my land and made my heritage an abomination."

I am more optimistic today than I ever was before. Basically because our numbers have grown, our legions are increasing. I am optimistic because I have read something by Louis Mumford. He discusses three concepts. The concept of negative miracles, the doctrine of emergence and the concept of singular points.

In physical systems, as in life, there occur those rare unpredictable moments when an infinitessimally small force, because of its character and position, is able to effect a very large transformation. This doctrine of singular points allows for the direct impact of the human personality on history, not only by organized movements and group actions, but by individuals who are sufficiently alert to intervene at the right time, at the right place, and for the right purpose.

Negative miracles are those singular points which radically change human events. They are not easy to determine until after they have done their work.

Related to this, it is my belief that we are in one of those times where we have the ability to change history. We are at the point where a negative miracle is called for and this miracle is saving the earth from ecological catastrophe. In order to bring this about we must be unreasonable because the people who are destroying and defiling our land are unreasonable men. We must become the new creative minority, the new nonconformists.

I'm convinced that only when we develop a true theology of ecology, a love for all living things, are we ever going to achieve the real politics of ecology, and then make environmental improvements, environmental protection, environmental enhancement a respectable occupation for all Americans.

We all must become environmental educators now. We must devise the programs and activities to bring this about. Our time is limited. Our land and resources are limited.

In closing, let me quote from Samuel Mind's new book, In the Last Days of Mankind. "Only when the rivers have become open sewers and the air sears the lungs and the trees are gone and the sun glares everywhere on concrete, does the average citizen even begin to wonder what has happened. Until then the few, you, who saw it happening and who tried to stop it are abused."

The blind Milton once advised "Acuse not nature, she hath done her part. Do thou but thine."

Nature, our environment, our heritage, our country needs all the help she can get.

18TH ANNUAL BUSINESS MEETING - CONSERVATION EDUCATION ASSOCIATION
Ann Arbor, Michigan
August 18, 1971

The annual business of the CEA verified the election results:

President	Clarence Billings	2 years
Second Vice President	David Engleson	2 years
Directors	Dean Bennett	3 years
	Claude Crowley	3 years
	Richard Myshak	3 years
	Edward Ambry	1 year

The Secretary-Treasurer's report was accepted:

1970-71 Fiscal Year Cash Transactions - June 30, 1971

Bank Transactions

Bank Balance, July 1, 1971		$1,150.53
Receipts		8,906.08
Disbursements	(-)	9,300.19
Transfer to Savings Account	(-)	299.69
Transfer from Savings Account		1,200.00
BANK BALANCE, JUNE 30, 1971		$1,656.73

Savings Account Transactions

Savings Account Balance, July 1, 1970		$6,790.45
Interest Receipts		432.68
Deposits		1,234.69
Transfer from Bank Checking Account		499.69
Transfer to Bank Checking Account	(-)	1,200.00
SAVINGS ACCOUNT BALANCE, JUNE 30, 1971		$7,757.51

Bank Balance, June 30, 1971		$1,656.73
Savings Account Balance, June 30, 1971		7,757.51
TOTAL CASH ASSETS		$9,414.24
Accounts Receivable		$1,816.90
Estimated 5% Noncollectable	(-)	90.85
ACCOUNTS RECEIVABLE June 30, 1971		$1,726.05

The membership as of August 1, 1971 shows:

Active	615
Student	47
Organizational	80
Emeritus	3
Gratuitous	1
Sustaining	3
Life	41

Mailing list of additional 20

The publications committee of the CEA reported on their progress. The present plans include a printing of two new publications, "A Directory of Colleges Offering Courses Leading to Studies in Education, Environment and Natural Resources", and an "Index of Environmental Films".

The CEA audience overwhelmingly endorsed the following resolution:

TO: U.S. Delegation to 1972 U.N. Conference on the Human Environment, Sen. Howard J. Baker, Jr., Chairman
c/o Slator C. Blackiston, Jr., Executive Director
SCI/EN, Department of State, Room 6807, Washington, D. C. 20520
202/632-8932

Recognizing the global impact of using the earth's natural resources which sustain all life and which transcend national boundaries,

...The Conservation Education Association believes environmental education to be the critical priority in resolving the ecological, economic, political and social crises which confront humankind.

Perceiving that environmental education can provide all peoples, young and old, wherever they may live, the fundamental understanding needed to move toward solution of these crises,

...CEA wishes to emphasize the need to have:

- an ecological awareness - a concern for the total environment,

- an economic awareness - a feeling for the relationships of monetary costs of today's ecological problems,
- a political awareness - an understanding of the individual roles as they relate to collective responsibility,
- a problem-analysis awareness - the ability to define resource problems, bringing to bear all facets and all points of view relating to it,
- a social awareness - responsiveness to changing goals and value judgments, and a sensitivity to the dynamics of communications between and among men and groups,
- a personal awareness - the realization that man is part of nature, not apart from nature.

...CEA urges the United Nations 1972 Conference on the Human Environment to give major consideration to environmental education which is of basic world and national importance in determining the quality and condition of the earth's life support system.

...CEA further urges that the United Nations establish means through which the peoples of the world can be brought to understand the relationships between the individual, society and the natural and modified eco-systems of which man is a part.

...CEA also urges the United Nations to design, maintain and continue environmental education presentations in such ways that all persons can learn to live in harmony with their environment without impairing or reducing its potential.

...Therefore, CEA recommends that particular attention be given to the following environmental education programs:

- integrated curriculum development throughout all educational systems,
- Community-based adult education and training in environmental planning, management and legislation, and
- research and development for environmental problem-solving.

- - - - -

The 19th Annual CEA Conference is scheduled for August 20-24, 1972, at Lincoln, Nebraska.

QUOTABLE QUOTES

"The quality of life has a very high value. Its value is survival." -- Spenser Havlick

"The environmental honeymoon is over." -- Senator Muskie

"Labor unions make great friends, but I'd hate to have them for enemies." -- James Swan

"History texts call this the land or opportunity, but make no mention of what opportunities have done to it." -- Senator Bursley

"Band-aid style activities are not about to solve the issues at hand." -- Youth Panel

"Environmental educators cannot pass on experience that they themselves don't have." -- Douglas Scott

"We don't have the twenty or thirty years necessary for conservation ideas to creep into the curriculum." -- George Lowe

"Dr., did you kill the 70 Japanese beetles?" -- Vic Yannoconne

ENVIRONMENTAL CRISIS

August 15-19, 1971

Alaska	1	Massachusetts	4	Pennsylvania	4
Arizona	1	Michigan	150	Tennessee	4
California	5	Minnesota	11	Texas	2
Colorado	1	Mississippi	1	Utah	2
Florida	3	Missouri	15	Vermont	2
Georgia	4	Montana	2	Virginia	4
Idaho	1	Nebraska	4	Washington	1
Illinois	11	Nevada	1	West Virginia	2
Indiana	10	New Jersey	7	Wisconsin	19
Iowa	1	New Mexico	1	Wyoming	1
Kansas	1	New York	19	District of Columbia	7
Kentucky	2	Ohio	13	Canada	3
Louisiana	4	Oklahoma	1	Phillipines	1
Maryland	3	Oregon	3	Virgin Islands	1
				TOTAL	333

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